

this application was between Formulae I and II in the Office Action dated October 3, 1997, and not between individual species of Formulae I. Formula I was elected for prosecution in the above-identified application. Claims 19 and 20 clearly refer to a species of Formula I (compound 13 on page 14 of the present specification) which was originally believed to be included in claim 1. Accordingly, Applicants request that the Examiner withdraw the restriction requirement to claims 19 and 20.

The Examiner has permission to cancel the non-elected claims if the elected claims are allowed.

The rejection of claims 15 and 26 under 35 U.S.C. § 112, first and second paragraphs, is respectfully traversed. However, merely to further prosecution, claim 15 has been canceled.

The Examiner argues that the process steps will not afford products where  $R_1$  is not hydrogen or products wherein  $n$  is 2. The Applicants respectfully submit that the specification fully enables the method as recited in claim 26.

Claim 26 requires that  $R_1$  be hydrogen and thus the part of the Section 112 rejection regarding  $R_1$  can only be directed to claim 15, now canceled.

In response to the part of the Section 112 rejection regarding  $n = 2$ , the Applicants submit that page 9, lines 9-25 of the present specification clearly demonstrates how to formulate compounds in which  $n$  is 2 using the method recited in claim 26. As can be seen from the specification, the compounds in which  $n$  is 2 can easily be formed by using a different starting material than the starting material for forming compounds in which  $n$  is

1. Thus, the method steps recited in claim 26 form compounds in which n is 1 or 2 depending on the starting material.

The Applicants respectfully submit that claim 26 fully complies with Section 112. Accordingly, withdrawal of the Section 112 rejection is respectfully requested.

The rejection of claim 27 under 35 U.S.C. § 112, second paragraph, is respectfully traversed. However, merely to further prosecution, claim 27 has been canceled. Accordingly, withdrawal of the Section 112 rejection is respectfully requested.

The Applicants note that the corresponding European patent application has been allowed.

The rejection of claims 8, 14-18, 21-25 and 27 under 35 U.S.C. § 103(a) over Hopp is respectfully traversed. The Applicants respectfully submit that the Examiner has not provided a prima facie case of obviousness and even if a prima facie case has been provided, the claimed invention is not obvious from Hopp for the following reasons.

The Examiner argues that the claims recite isomers or homologs of the compounds disclosed in Hopp and differ only by the placement of the alkyl on the benzene ring. By use of the term "isomers" it is believed that the Examiner is referring to "position isomers" which are defined by MPEP 2144.09 as "compounds having the same radicals in physically different positions on the same nucleus." Homologs are defined by MPEP 2144.09 as "compounds differing regularly by the successive addition of the same chemical group, e.g., by -CH<sub>2</sub>- groups."

The Applicants respectfully submit that Hopp does **not** disclose the use of alkyls substituted on the benzene ring, but rather only the use of **isopropyl** or **tert-butyl**. See

column 1, line 39 of Hopp. Thus, the only compounds recited in the claims of the subject application that can be a "position isomer" of the compounds disclosed in Hopp are those in which only one of  $R_3$ ,  $R_4$ ,  $R_6$  and  $R_7$  is isopropyl or tert-butyl, the remaining groups  $R_3$  through  $R_7$  and  $R_1$  are hydrogen,  $R_2$  is methyl, and  $n$  is 1. Furthermore, the only compounds recited in the claims of the subject application which can be a "homolog" of the compounds disclosed in Hopp are those in which  $R_5$  is isopropyl or tert-butyl, all of  $R_3$ ,  $R_4$ ,  $R_6$  and  $R_7$  are hydrogen,  $R_2$  is methyl, and  $n$  is 2. All other compounds recited in the claimed invention cannot be position isomer or homolog of the compounds disclosed in Hopp.

New claims 27-42 do not include an isopropyl or tert-butyl compound present on the benzene ring. Therefore, the compounds recited in claims 27-42 cannot be position isomers or homologs of the compounds recited in Hopp. For these reasons, claims 27-42 cannot be prima facie obvious from Hopp using the theory of Isomers or Homologs. Furthermore, even if a prima facie case has been provided, claims 27-42 are not obvious over Hopp.

The Applicants respectfully submit that homology and isomerism are not substitutes for a prima facie case of obviousness and they are only a relevant fact in the determination of obviousness.

The experimental evidence of record rebuts any prima facie case of obviousness provided by the Examiner. Claims 8, 14-18, 21-25, and 27-42 recite novel compounds and compositions which are not disclosed in Hopp. The experimental evidence disclosed in the present specification demonstrates the unexpected advantages of the claimed

compounds compared to those disclosed in Hopp. Hopp only discloses that their compounds have a microbicide effect on staphylococcus epidermis and aureus, and candida albicans. In contrast, the claimed compounds and compositions exhibit a microbicide effect against e-coli (Tables on pages 19, 21, 25, and 27), as well as anti-fungal properties (Tables on pages 23 and 24). Hopp does not disclose these advantages and therefore cannot make obvious the compounds and compositions recited in claims 8, 13-18, 21-25 and 27-42.

The Applicants respectfully submit that Examiner's allegations that one of ordinary skill in the art would be motivated to make the claimed compounds is based on unfounded assumptions. The Examiner's reliance on *In re Shetty*, 195 USPQ 753; *In re Lintner*, 173 USPQ 560; and *In re Hoch*, 166 USPQ 406, to support a prima facie case of obviousness and to find obviousness is without merit for the following reasons.

*Shetty* stated that homologs may give rise to a prima facie case of obviousness since the Appellants did not provide counter arguments. *Shetty*, p 756, held that since the Appellants did not provide any experimental evidence showing actual differences in properties the homologs were obvious, relying on *Hoch*. In contrast to the facts in *Shetty*, the Applicants have demonstrated that the properties of the claimed compounds are actually different than those of Hopp, as discussed above. Furthermore, the compounds of recited in claims 27-42 are not isomers or homologs of the compounds disclosed in Hopp and therefore *Shetty* does not support the Examiner's conclusion that a prima facie case of obviousness has been presented.

*Lintner* relates to a laundry composition in which the invention differed from the prior art composition by the reason for the addition of sugar. The prior art disclosed the use of sugar. The court found the presence of sugar for a different reason was not patentable. The court in *Lintner*, at p. 562, stated that:

"In determining the propriety of the Patent Office case for obviousness in the first instance, it is necessary to ascertain whether or not the reference teachings would appear to be sufficient for one of ordinary skill in the relevant art having the references before him to make the proposed substitution, combination or other modification."

The Examiner has not demonstrated how the references teach or provide a suggestion to one of ordinary skill in the art to modify the compounds of Hopp to arrive at the claimed compounds, in particular claims 27-42 which are not isomers or homologs of the compounds disclosed in Hopp. Unlike the facts in *Lintner*, the claimed compounds are not disclosed in Hopp, whereas the sugar in *Lintner* was disclosed in the prior art references. Thus, Examiner's finding of obviousness based on *Lintner* is without merit and should be withdrawn.

*Hoch*, p. 409, held that a prima facie case was not overcome because the applicant did not show how the reference compounds and claimed compounds actually differ in properties. In contrast, the Applicant has demonstrated that the properties of the claimed compounds are actually different than those of Hopp, as discussed above. Thus, *Hoch* does not support the Examiner's conclusion that the claimed invention is obvious over Hopp.

For all of the reasons advanced above, the Applicants submit that the claimed invention is not obvious over Hopp and therefore withdrawal of the Section 103 rejection is respectfully requested.

The rejection of claims 8, 13-18, 21-25, 37 and 33-35 under 35 U.S.C. § 103(a) over Sipos is respectfully traversed. The claimed invention is not taught or suggested by Sipos for the following reasons.

The Examiner admits that Sipos does not disclose the claimed compounds. However, the Examiner argues that the group III phenol alkanols disclosed in Sipos generically teach the claimed compounds.

The Applicants respectfully submit that Sipos teaches that the large list of group III phenol alkanols cited by the Examiner are only "potentiators" (column 4, lines 23 and 55). Potentiators are taught as enhancing the activity of an antimicrobial agent, not that the potentiator is an antimicrobial agent (column 3, lines 15-18).

In contrast, the presently claimed compounds are antimicrobial agents, disinfectants, deodorants, antimycotics or preservatives, not merely potentiators, as demonstrated by the experimental results disclosed in the Examples of the present specification. Sipos does not teach or suggest that any species in the group III phenol alkanols would have antimicrobial, disinfectant, deodorant, antimycotic or preservative properties and therefore cannot make obvious use of these compounds as an antimicrobial agent, disinfectant, deodorant, antimycotic or preservative.

The Applicants respectfully submit that Examiner's allegations that one of ordinary skill in the art would be motivated to make the claimed compounds from reading Sipos is

based on unfounded assumptions. The Examiner again improperly relies on *In re Shetty*, 195 USPQ 753; *In re Lintner*, 173 USPQ 560; and *In re Hoch*, 166 USPQ 406, to support a prima facie case of obviousness and to find obviousness.

*Shetty* stated that homologs may give rise to a prima facie case of obviousness since the Appellants did not provide counter arguments. *Shetty*, p 756, held that since the Appellants did not provide any experimental evidence showing actual differences in properties the homologs were obvious, relying on *Hoch*. In contrast to the facts in *Shetty*, the Applicants have demonstrated that the properties of the claimed compounds are actually different than those of Sipos, as discussed above. Sipos does not disclose any properties of compounds which are purported to be similar to the claimed compounds. Furthermore, the claimed compounds are not isomers or homologs of the compounds disclosed in Sipos and therefore *Shetty* does not support the Examiner's conclusion that a prima facie case of obviousness has been presented.

*Lintner* relates to a laundry composition in which the invention differed from the prior art references by the reason for the addition of sugar. The prior art disclosed the use of sugar. The court found the presence of sugar for a different reason was not patentable. The court in *Lintner*, at p. 562, stated that:

"In determining the propriety of the Patent Office case for obviousness in the first instance, it is necessary to ascertain whether or not the reference teachings would appear to be sufficient for one of ordinary skill in the relevant art having the references before him to make the proposed substitution, combination or other modification."

The Examiner has not demonstrated how the references teach or suggest to one of ordinary skill in the art to modify the compounds of Sipos to arrive at the claimed compounds. Unlike the facts in *Lintner*, the claimed compounds are not disclosed in Sipos, whereas the sugar in *Lintner* was disclosed in the prior art references. Thus, Examiner's finding of obviousness based on *Lintner* is without merit and should be withdrawn.

*Hoch*, p. 409, held that a prima facie case was not overcome because the applicant did not show how the reference compounds and claimed compounds actually differ in properties. In contrast, the Applicant has demonstrated that the properties of the claimed compounds are actually different than those of Sipos, as discussed above. Thus, *Hoch* does not support the Examiner's conclusion that the claimed invention is obvious over Sipos.

For all of the reasons advanced above, the Applicants submit that the claimed invention is not obvious over Sipos and therefore withdrawal of the Section 103 rejection is respectfully requested.

The rejection of claims 15 and 26 under 35 U.S.C. § 103(a) over Hafner in view of Vogel is respectfully traversed. Claims 15 and 26 are not taught or suggested by the theoretical combination of Hafner and Vogel for the following reasons.

The Examiner admits that Hafner does not teach the claimed step (a) (column 3 of Hafner) and that some of the reactants differ as to the substituents present. The Examiner argues that Vogel teaches the claimed step (a).



There is no motivation in either of the cited references to follow the claimed step (a) to form the specific monoalkylated malonic acid alkyl esters claimed and then follow the claimed steps (b) through (d) to form the specific alcohols presently claimed. The Applicants respectfully submit that the Examiner is unfairly relying on hindsight gleaned from the present specification and is improperly using the present specification as blueprint to piece the references together.

The Examiner admits that Hafner uses different reactants and thus forms different products than those presently claimed. The Examiner merely argues that the use of a new starting material in an otherwise old process is considered obvious. The Applicants respectfully direct the Examiner's attention to In re Ochiai, 37 USPQ2d 1127, 1113 (Fed. Cir. 1995), in which the Federal Circuit recently stated that:

"when any applicant properly presents and argues suitable method claims, they should be examined in light of all ... relevant factors, free from any presumed controlling effect of Durden or any other precedent."

The Examiner has provided no motivation or teaching in any of the cited references which would direct one of ordinary skill in the art to ignore the teachings in Hafner and use different reactants (as presently claimed) and then change the process of Hafner and use part of the method disclosed in Vogel.

The Examiner improperly relies on *In re McLaughlin*, 170 USPQ 209 to support a prima facie case of obviousness. *McLaughlin* relates to a mechanical invention in which a reference teaching boxcars is combined with a reference teaching a side filler panel. The Examiner is relying on the statement "any judgment on obviousness is in a sense

necessarily a reconstruction based upon hindsight reasoning" to support his prima facie case. However, the Examiner must still demonstrate that the some teaching in the prior art provides the motivation to combine the teachings. The Federal Circuit stated in Uniroyal Inc. v. Rudkin-Wiley Corp., 5 USPQ2d 1434, 1438 (Fed. Cir. 1988) that:

"When prior art references require selective combination . . . to render obvious a subsequent invention, there must be some reason for the combination other than the hindsight gleaned from the invention itself . . . Something in the prior art as a whole must suggest the desirability, and thus the obviousness, of making the combination."

The Applicants submit that the Examiner has not provided any teaching or suggestion in the prior art which provides any motivation to selectively combine Hafner and Vogel.

For these reasons, the Applicants respectfully submit that the Examiner has not provided sufficient evidence to support a prima facie case of obviousness and the Section 103 rejection should be withdrawn for this reason alone.

Even if the references were combined, the theoretical combination of Hafner and Vogel would not make obvious the method recited in claims 15 and new claim 26. The theoretical combination of Hafner and Vogel provides a method which makes a different alcohol than those claimed because Hafner teaches the use of different reactants than those in the claimed method.

Furthermore, the claimed invention provides unexpected properties not disclosed in the cited references. As discussed above, the compounds formed by the claimed method exhibit antimicrobial, disinfectant, deodorant, antimycotic or preservative properties. Hafner only discloses that the alcohols disclosed therein provide fragrance

U.S. Serial No. 08/860,007  
March 26, 1999  
Page 12

properties. Vogel also does not teach or suggest a method of forming compounds that are suitable for use as antimicrobial, disinfectant, deodorant, antimycotic or preservative agents.

For these reasons, the claimed method is not taught or suggested by the theoretical combination of Hafner and Vogel. Accordingly, withdrawal of the Section 103 rejection is respectfully requested.

In view of all of the rejections and objections of record having been addressed, it is believed that the subject application is in condition for allowance and notice to that effect is earnestly solicited.

Respectfully submitted,

Farkas & Manelli, PLLC

By

  
Jeffrey S. Melcher

Reg. No.: 35,950

Tel. No.: (202) 261-1045

Fax. No.: (202) 887-0336

Customer No. 20736